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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,355

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Masayoshi Esashi

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06/10/2010

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EXAMINER

CHEN, VICTORIA W

ART UNIT

PAPER NUMBER

3739

NOTIFICATION DATE

DELIVERY MODE

06/10/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,355	<b>Applicant(s)</b> ESASHI ET AL.	
	<b>Examiner</b> VICTORIA W. CHEN	<b>Art Unit</b> 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-9,11-16,18-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-9,11-16,18-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

The drawings were received on 3/22/10. These drawings are accepted.

### ***Claim Objections***

Claim 12 objected to because of the following informalities: claim 12 recites “an wire” which should be --a wire-- in line 3. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 4, 5, 7-9, 11-13, 15, 16, 18-20, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Takehana et al. (US 4930494).**

Regarding claim 1, Takehana discloses an active tube, comprising; a working channel tube [Fig. 59] inside of which is used as a working channel [233]; an SMA coil [227] arranged along said working channel tube; one or more circular weights [Fig. 64, each circular ring of elements 251 is considered one circular weight, col. 23, ll. 12-15, knurls can be attached to outer periphery of protecting tube which corresponds to element 234 in Fig. 59] attached on an outer surface of said working channel tube and said SMA coil and an outer skin tube [240] covering said outer surface of said working channel tube and said SMA coil [Fig. 59].

Regarding claim 2, Takehana discloses an active tube, wherein it comprising a tip [223] and a main tube [222] connected to said tip, and said tip comprises: a working channel tube [Fig.

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59] connected through to said main tube; a bending mechanism [223] to support said working channel tube and to bend said working channel tube; one or more circular weights [Fig. 64, each circular ring of elements 251 is considered one circular weight, col. 23, ll. 12-15, knurls can be attached to outer periphery of protecting tube which corresponds to element 234 in Fig. 59] attached on an outer surface of said bending mechanism; an outer skin tube [240] covering said outer surface of said bending mechanism together with said weight, wherein said bending mechanism includes an SMA coil [227] arranged in a longitudinal direction of said working channel tube [Fig. 59].

Regarding claims 4 and 5, Takehana discloses an endoscope is built into said tip, or alternatively can be interpreted as being inserted into said working channel tube of said tip [col. 22, ll. 14-17].

Regarding claim 7, Takehana discloses a front end of the endoscope is provided with an image input part comprising an optical fiber or an image pickup device and a light guide for illumination or LED to illuminate forward of said image input part [col. 22, ll. 44-50].

Regarding claim 8, Takehana discloses said bending mechanism is provided with a pair of links [225, 226] attached at an interval to said working channel tube [Fig. 59]; an outer skin [240] contacted to said pair of links and covering said working channel tube; and an air layer is formed with said pair of links and an outer surface of said working channel tube [Fig. 59].

Regarding claim 9, Takehana discloses said links have small diameter holes [228], said SMA coil is inserted through a first small diameter hole of a behind link and a first small diameter hole of a front link, bent back at the front end of said front link, inserted through a

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second small diameter hole of said front link and a second small diameter hole of said behind link, and is wired [Fig. 62].

Regarding claim 11, Takehana discloses a plurality of said SMA coils are provided at equal intervals with respect to a central axis of said working channel tube between said pair of links [Fig. 61].

Regarding claim 12, Takehana discloses said main tube is provided along an axis of said main tube with a working channel [within 224] connected through to said working channel tube [Fig. 59] and a wiring channel [interior of 224] to insert a wire [237] to be connected to said SMA coil of said bending mechanism.

Regarding claim 13, Takehana discloses an active tube system, comprising an active tube [Fig. 59], a control box [9] to control a bending mechanism of said active tube, and a control input part [7] to input control information for said bending mechanism to said control box; and said active tube comprises a tip [223] and a main tube [222] connected to said tip, and wherein said tip comprises: a working channel tube [Fig. 59] connected through to said main tube; a bending mechanism [223] to support said working channel tube and to bend said working channel tube; one or more circular weights [Fig. 64, each circular ring of elements 251 is considered one circular weight, col. 23, ll. 12-15, knurls can be attached to outer periphery of protecting tube which corresponds to element 234 in Fig. 59] attached on the outer surface of said bending mechanism; an outer skin tube [240] covering said outer surface of said bending mechanism together with said weight, wherein said bending mechanism includes an SMA coil [227] arranged in a longitudinal direction of said working channel tube [Fig. 59].

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Regarding claims 15 and 16, Takehana discloses an endoscope is built into said tip, or alternatively can be interpreted as being inserted into said working channel tube of said tip [col. 22, ll. 14-17].

Regarding claim 18, Takehana discloses a front end of the endoscope is provided with an image input part comprising an optical fiber or an image pickup device and a light guide for illumination or LED to illuminate forward of said image input part [col. 22, ll. 44-50].

Regarding claim 19, Takehana discloses said bending mechanism is provided with a pair of links [225, 226] attached at an interval to said working channel tube [Fig. 59]; and an outer skin [240] contacted to said pair of links and covering said working channel tube; and an air layer is formed with said pair of links and the outer surface of said working channel tube [Fig. 59].

Regarding claim 20, Takehana discloses said links have small diameter holes [228] and said SMA coil is inserted through a first small diameter hole of a behind link and a first small diameter hole of a front link, bent back at the front end of said front link, inserted through a second small diameter hole of said front link and a second small diameter hole of said behind link, and is wired [Fig. 62].

Regarding claim 22, Takehana discloses a plurality of said SMA coils are provided at equal intervals with respect to a central axis of said working channel tube between said pair of links [Fig. 61].

Regarding claim 23, Takehana discloses said main tube is provided along an axis of said main tube with a working channel [within 224] connected through to said working channel tube

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[Fig. 59] and a wiring channel [interior of 224] to insert a wire [237] to be connected to said SMA coil of said bending mechanism.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 3, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takehana as applied to claims 2 and 13 above, in view of McCoy (US 5114402).**

Regarding claims 3 and 14, Takehana teaches the invention as claimed, including a main tube, but fails to teach a cylindrical thin film inflatably covering an outer surface of the main tube and said main tube being provided with a balloon inflating channel to supply gas or liquid into a space between said main tube and thin film, thereby said thin film is inflated to form a balloon. McCoy teaches a bendable endoscope [70] comprising shape memory coils with a balloon (e.g. cylindrical thin film) covering the endoscope tube for anchoring the endoscope

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within a desired location in a body cavity [col. 7, ll. 44-60]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the active tube with a balloon on the main tube to provide the advantage of anchoring the endoscope within a desired location in a body cavity.

Regarding claim 24, Takehana teaches a control input part [7] which is manually operable by the user, but fails to specifically teach the control input part being a control stick with a formed grip and provided with a slide type operation mechanism that can be grabbed with a palm. McCoy teaches a control unit [30] having a control stick [34] for controlling the bending action of the endoscope. McCoy further teaches that various types of control devices can be employed [col. 6, ll. 5-18]. Since both Takehana teaches steerable endoscopes having control input parts for controlling the bending of the endoscope, it would have been obvious to one of ordinary skill to substitute one for the other to achieve the predictable result of controlling the bending of the endoscope. It is noted that applicant's specification fails to provide any criticality and/or unexpected result associated with the claimed control input device. Therefore the examiner maintains that one of ordinary skill in the art would obviously recognize that any reasonable kind of control input part may be used to achieve the desired results.

### ***Response to Arguments***

Applicant's arguments filed 3/22/10 have been fully considered but they are not persuasive.

In response to applicant's argument that the working channel tube and weights as disclosed by Takehana are not equivalent to those claimed by applicant, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed



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invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VICTORIA W. CHEN whose telephone number is (571)272-3356. The examiner can normally be reached on M-F 8:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victoria W Chen/  
Examiner, Art Unit 3739

/John P Leubecker/  
Primary Examiner, AU 3739